## APPENDIX E. Regional Groundwater Use

The RMI Plant site is located in eastern part of the City of Ashtabula, approximately one mile south of Lake Erie and immediately south of Fields Brook. Fields Brook is a westerly flowing tributary to the Ashtabula River, which it joins approximately one mile west of the RMI property. The watershed of the Ashtabula River is a primary surface water source to the central basin area of Lake Erie. Within the watershed, the City of Ashtabula is the only major urban center. The remaining parts are dominantly rural and agricultural. In contrast to this wider scale characterization, the areas adjacent to Fields Brook and parallel to the Ashtabula River through the City towards Lake Erie are largely developed and historically industrialized.

Map 1 locates the RMI site on an enlarged portion of the USGS 7.5 Minute Ashtabula North topographic quadrangle map. The map shows that RMI is established on a southwest-to-northeast trending topographic high. The topography of and adjacent to the RMI property shows several north and northwesterly trending surficial swales, lows and/or drainage patterns. Each of these features leads into the course of Fields Brook.

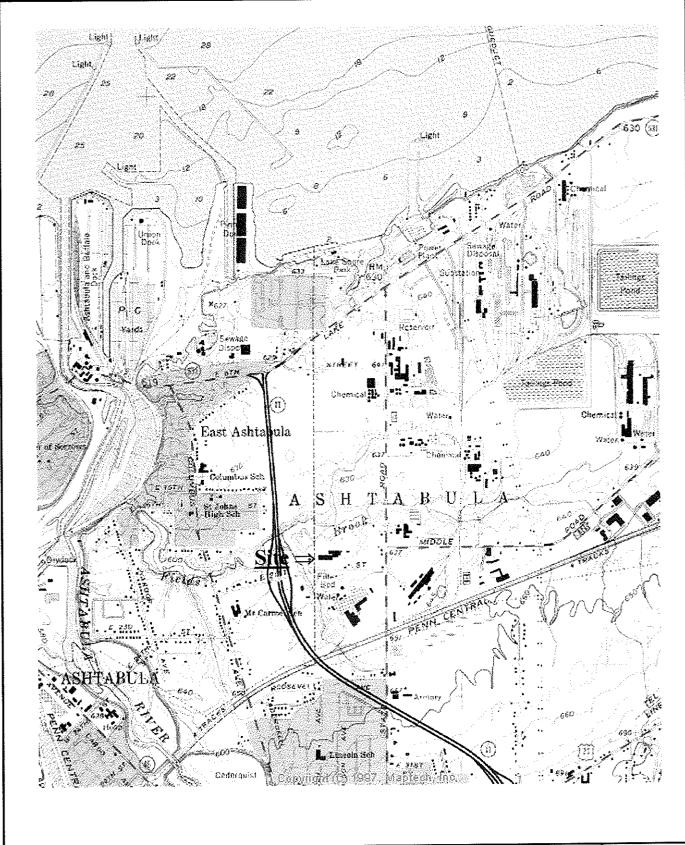
These surface water characteristics are significant as it is surface water that provides the dominant water supply source for the City of Ashtabula, industry and developments in the area. The geology of the region, as discussed in Section 2.1, dominantly consists of very low permeability glacial till(s) that overlie relatively impervious dark shale bedrock. These lithologic and stratigraphic constraints largely prohibit the development of usable groundwater resources. Map 2 is the ODNR Groundwater Resources Map of Ashtabula published by the Division of Water. The map shows that RMI sets within the hydrogeologic area described as being "less than 30 feet of clay and sandy clay overlying shale". Groundwater yields in this area are characteristically < 3 gallons per minute where found along the weathered upper shale bedrock contact with overlying glacial till. This poor groundwater resources area continues throughout all areas downgradient to the RMI site.

To assess the potential for groundwater usage at distance from RMI, the ODNR Division of Water's well files for Ashtabula Township were searched on January 21, 2003 (reference Map 3 and the individual well records contained in Appendix 1). Note that Ashtabula Township includes the City of Ashtabula. In addition to the Division's "located" well records that they post on the base map and highlighted in yellow, they also maintain files of "unlocated" well records. Unlocated wells are those whose address cannot be reliably spotted, or newly drilled wells. SHARP reviewed the "unlocated" well files and tentatively spotted four additional wells onto the Division's map. These tentative wells are posted in blue.

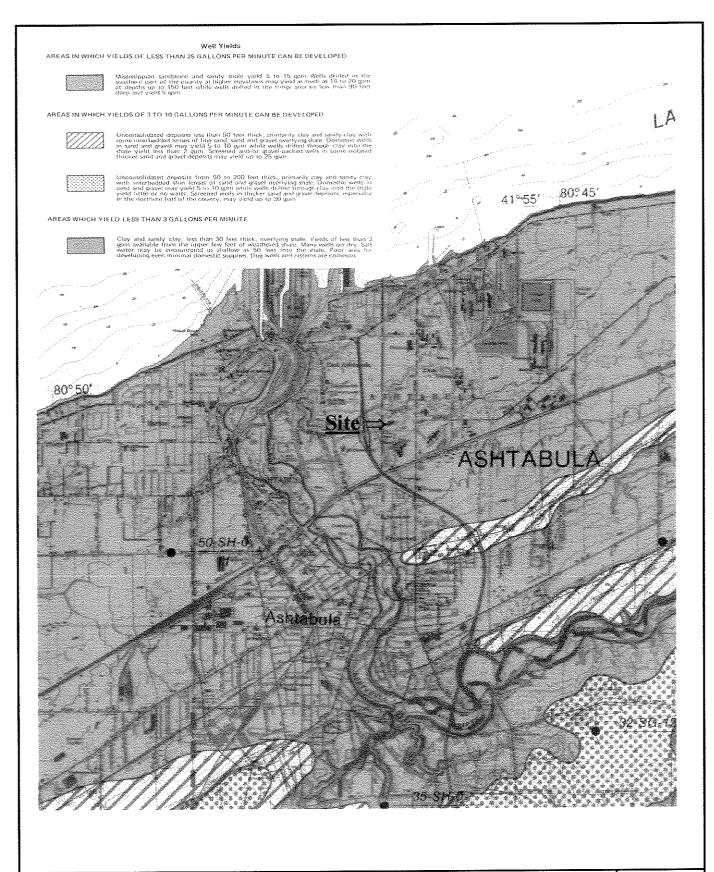
The records for all of the wells posted on Map 3 are included in Appendix 1. These records show that eleven of the twelve "located" wells are completed in shale bedrock and produce at an average rate of 2.4 gallons/minute. This fully agrees with the characterizations presented on the Groundwater Resources Map (Map2). The single located well that is completed in a gravel overlying bedrock is designated #2. This well is located at the far southern border of the township, approximately 3.5 miles from the RMI site.

#### Summarily:

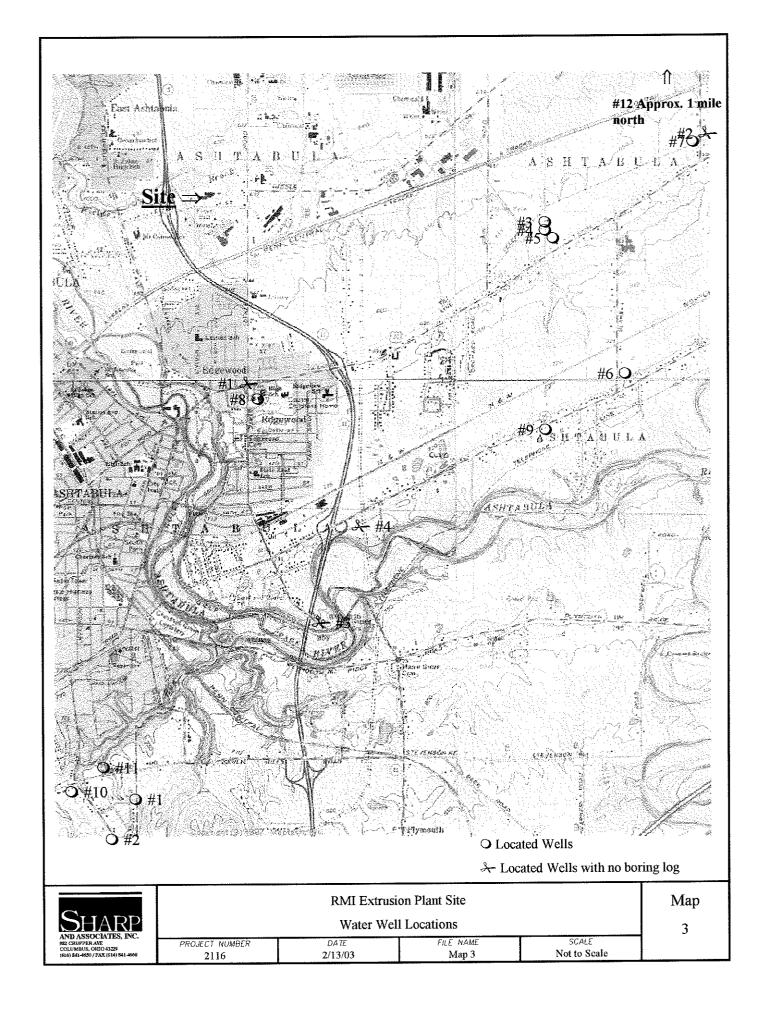
- the location posting of wells on Map 3 show that there are no reported groundwater wells located within at least a one mile radius of the RMI site,
- the testing and production records for the located wells show that the potential for groundwater usage is low owing to poor production, questionable water quality and discontinuous occurrence of any aquifer, and
- the City of Ashtabula is served by a municipal system that relies on surface water supply from Lake Erie.



		Map						
SHARP	Obob 7.5 Minute Topograpine Map							
AND ASSOCIATES, INC. 982 CRUPPER AVE COLUMBUS, OHIO 43229 (514) 841-4659 / FAX (614) 841-4660	PROJECT NUMBER	DATE 2/13/03	FILE NAME Map 1	SCALE Not to Scale				



		Map				
SHARP AND ASSOCIATES, INC.	Ground with the same with					
982 CRUPPER AVE COLUMBUS, OHIO 43229 (614) 841-4650 / RAX (614) 841-4660	PROJECT NUMBER 2116	DATE 2/13/03	FILE NAME Map 2	SCALE  Not to Scale		



State of Ohio

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DEPARTMENT OF NATURAL RESOURCES

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State of Ohio

PLEASE USE PENCIL OR TYPEWRITER

DEPARTMENT OF NATURAL RESOURCES

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Division of Water 1562 W. First Avenue Columbus, Ohio 43212

			Section of Township
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\*If additional space is needed to complete well log, use next consecutive numbered form.

PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK.

## State of Ohio DEPARTMENT OF NATURAL RESOURCES

Division of Water
1562 W. First Avenue

Nº 309866

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Drilling Firm MR. PAU			Date J U N 0 30, 1964 Signed Paul M = 6/11
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SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES

Division of Water

65 S. Front St., Rm. 815 Phone (614) 469-2646 Columbus, Ohio 43215 No. 420870

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Owner martin 1st	(ggins	<u>ر</u>	Address Tillation Rd.
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State of Ohio

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#### DEPARTMENT OF NATURAL RESOURCES

Division of Water 1562 W. First Avenue

Columbus, Ohio

No. 274785

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DEPARTMENT OF NATURAL RESOURCES

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Division of Water
1562 W. First Avenue

a DE L	(	Columbus, C	Ohio 43212
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Owner Gu	<u>-ÇCC</u>	!	Address Bake nd alt carrie a
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CONSTRUCTION		,	BAILING OR PUMPING TEST
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PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK.

# State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water 1562 W. First Avenue.

Nº 284603

Columbus 12, Ohio County AShtabula Township Ashtabula Section of Township Owner Daniel Smylli Address Location of property on West Side of 5. // Rd BAILING OR PUMPING TEST CONSTRUCTION DETAILS Casing diameter 2" Length of casing 199 Pumping Rate.......G.P.M. Duration of test.....hrs. Drawdown ft. Date Type of screen.....Length of screen.... Static level-depth to water ft. Type of pump..... Quality (clear, cloudy, taste, odor)..... Capacity of pump..... Depth of pump setting.... Pump installed by..... Date of completion..... SKETCH SHOWING LOCATION WELL LOG Formations Locate in reference to numbered Sandstone, shale, limestone, To From State Highways, St. Intersections, County roads, etc. gravel and clay 19 Ft. N. 0 Feet CLay 30 14 Shale 5:11 Rd. W. WATER 25 ft S. See reverse side for instructions Drilling Firm Paul 911 Sil Signed .....

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# State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water 1562 W. First Avenue

Columbus, Ohio

No. 241682

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Drilling Firm HUL Er  Address R#2 Gal		S.  See reverse side for instructions  Date 8/34/59  Signed P J L E

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State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water

Nº 295286

PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK.

' 1562 W. First Avenue' Columbus 12, Ohio

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Owner	54	1 mi	Address 5933 Weshington Ked, asking E. of State Ad.		
Location of property		0\777.			
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## or Ohio DEPARTMENT OF NATURAL RESOURCES

Division of Water 1562 W. First Avenue Columbus 12. Ohio **N**º 292538

County County	Township	Columbu	s 12, Ohio  Section of Township		
Owner	Car. 1		Section of Township		
Location of property.		1200	Address A Delings Hd.		
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Drilling Firm HARGLD INM	AN	<u></u>	See reverse side for instructions		
Address <u>FI PREFERSON</u>	OHIO 3	*******************************	Date Signed		

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## State of Ohio DEPARTMENT OF NATURAL RESOURCES

Division of Water 1562 W. First Avenue Columbus 12, Ohio **N**9 292523

County Contract	Township	July Jak	Section of Township
Owner Mistage M	Lucia		Address Howard Rd. Ostrafic
Location of property	reed-	17. 4	5 E of 121 46
CONSTRUCTION	DETAILS		BAILING OR PUMPING TEST
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Drilling Firm HAROUD IN WELL DRILL RT. 2-JEFFERSON			Date 1/24/63 Signed 1/24/63

State of Ohio

DEPARTMENT OF NATURAL RESOURCES

No 347752

PLEASE USE PENCIL OR TYPEWRITER

Division of Water

DO NOT USE INK. 4562 W. First Avenue . Columbus, Ohio 43212 County Township... Section of Township. Location of property. CONSTRUCTION DETAILS BAILING OR PUMPING TEST 6" O.D. Length of casing.... Pumping Rate 10 G.P.M. Duration of test 8 hrs. Casing diameter .... Drawdown 170 ft. Date 9-17 Type of screen....Length of screen... Type of pump.... Capacity of pump..... Quality (clear, cloudy, taste, odor) \_\_\_\_\_\_\_ Depth of pump setting..... Date of completion 9-17-Pump installed by..... WELL LOG\* SKETCH SHOWING LOCATION **Formations** Locate in reference to numbered Sandstone, shale, limestone, From To State Highways, St. Intersections, County roads, etc. gravel and clay N. 0 Feet W. E. LOCATED S. See reverse side for instructions HAROLD INMAN WELL DRILLING RT. 2-JEFFERSON, OHIO Address Signed / TE

\*If additional space is needed to complete well log, use next consecutive numbered form.

State of Ohio

DEPARTMENT OF NATURAL RESOURCES

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Division of Water 65 S. Front St., Rm. 815 Phone (614) 469-2646

Columbus, Ohio 43215

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Type of pump			Static level-depth to water 96 ft.  Quality (clear, cloudy, taste, odor)
Depth of pump setting  Date of completion			Pump installed by
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State of Ohio
DEPARTMENT OF NATURAL RESOURCES

Nº 361533

Division of Water

DO NOT USE INK.	(	Columbus.	irst Avenue Ohio 43212
County Alktakula	Township	askti	Section of Township
Owner James Gri	swold		Address 835 W, 48th, distabilia C;
			, 2 mi. N. of Talliso, Rd.
CONSTRUCTION	DETAILS		BAILING OR PUMPING TEST
Casing diameter 6' 0,0, Ler	ngth of casi	ng 57'	Pumping Rate G.P.M. Duration of test hrs
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Type of pump			Static level-depth to waterft.
Capacity of pump			
Depth of pump setting			good
Date of completion 9-	9-66	**	Pump installed by
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			S.
			See reverse side for instructions
rilling Firm WELL DRI	INMAN		Date 2-25-67
Address RT. 2-JEFFER	SON, OHIO	**	Signed Harold Learn

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State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water

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1562 W. First Avenue . Columbus, Ohio 43212

County Ach	Township	Asista.	Section of Township 5 7
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Address Carris	RIE	2 KT2	Signed M. P. Parantin St. 1111

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## State of Ohio DEPARTMENT OF NATURAL RESOURCES

Division of Water

65 S. Front St., Rm. 815

t., Rm. 815 Phone (614) 469-2646 Columbus, Ohio 43215

No. 402759

Owner Alexand	dais	-	Address
Location of property		m Cuin	11-11 Endand getfalula
CONSTRUCTION	DETAILS		BAILING OR PUMPING TEST (Specify one by circling)
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Type of pump			Static level-depth to water 150 f
Capacity of pump	***********		Quality (clear, cloudy, taste, odor)
Depth of pump setting			
Date of completion.	×		Pump installed by
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#### DEPARTMENT OF NATURAL RESOURCES

Division of Water 1562 W. First Avenue

No. 274774

Columbus, Ohio County ASHTA BUL A Township Section of Township S-C Owner Bill Rogers Address PILLITSON Rd Location of property PILLATSON-Rd Edgewood Warth BAILING OR PUMPING TEST CONSTRUCTION DETAILS Casing diameter \_\_\_\_\_ Length of casing \_\_\_\_\_ Pumping rate \_\_\_\_ G.P.M. Duration of test \_\_\_\_\_ hrs. Type of screen Drawdown ft. Date Capacity of pump Static level—depth to water 2. Julia min ft. Depth of pump setting Pump installed by..... Date of completion SKETCH SHOWING LOCATION WELL LOG **Formations** Locate in reference to numbered Sandstone, shale, limestone, From To State Highways, St. Intersections, County roads, etc. gravel and clay .....Ft. 0 Feet N. 16 CLAS 35 SHALE WATER

W.

Address R. F. D. 2. ASHTABULAO Signed MAY-26-62

See reverse side for instructions

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State of Ohio

DEPARTMENT OF NATURAL RESOURCES

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Division of Water

1562 W. First Avenue Columbus, Ohio 43212

County Texture	. Township.	askta	Section of Township
Owner Ed July	1 (B	ldrs)	Address ; dustinours pld, Litarula ic,
Location of property 11.8	4, 2 11	u, E, E.	-pt, i'm (-pt, 4) Salustale)
CONSTRUCTION	DETAILS	3	BAILING OR PUMPING TEST
Casing diameter 6 90 Ler	igth of casi	ng 48	Pumping Rate 3 G.P.M. Duration of test 2 hrs
Type of screenLer	gth of scre	en	Drawdown 43 ft. Date 5-9-66
Type of pump	***************************************		Static level-depth to water 45 ft.
Capacity of pump	·		Quality (clear, cloudy, taste, odor) Chal
Depth of pump setting			accd
Date of completion	9-66		Pump installed by
WELL LO	)G*		SKETCH SHOWING LOCATION
Formations Sandstone, shale, limestone, gravel and clay	From	·To	Locate in reference to numbered State Highways, St. Intersections, County roads, etc.
wand	0 Feet	35 Ft.	N.
$\mathcal{F}_{i}$	35	38	\ \\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\
25. Cd y		44	
AKK!	44	90	Afficiel.
		f - <del></del>	
			W E.
			( ) H, +6
			S. See reverse side for instructions
	) LD INMA <del>L'ORILLING</del>		Date 2-4-67
***	EFFERSON, (		Signed Signed

PLEASE USE PENCIL OR TYPEWRITER

# State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water 1562 W. First Avenue

**N**9 335029

County Francisco County

CONSTRUCTION	DETAILS		BAILING OR PUMPING TEST	
Casing diameterLeng Type of screenLeng Type of pumpLnallLeng	gth of casin	n 1977	Pumping Rate G.P.M. Duration of test 3.00 hr Drawdown ft. Date of fixed from the	
Capacity of pump			Quality (clear, cloudy, taste, odor)	
Depth of pump setting				
Date of completion.			Pump installed by	
WELL LO	G*		SKETCH SHOWING LOCATION	
Formations Sandstone, shale, limestone, gravel and clay	From	То	Locate in reference to numbered State Highways, St. Intersections, County roads, etc.	
	0 Feet	ے Ft.	N.	
<u> </u>	<u>.5.0</u>	2/3		
<u>shoic</u>	20	1.13	-130	
water at 13#	<u></u>	· · · · · · · · · · · · · · · · · · ·	W. Austiniouralia	
			Costr 32 ACE	
			S. See reverse side for instructions	

## State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water

Division of Water Columbus, Ohio

Nº 170122 /

· /		_	
County Coa.	Township	asa.	Section of Township or Lot Number
Owner Burne	Bake		Address ashtabula PD
Location of property	+ rtle	Ba	ne 5, of ashtabula
CONSTRUCTION	DETAILS	THE STREET	PUMPING TEST
Casing diameter 6. O.P.Len Type of screenLen Type of pump Capacity of pump Depth of pump setting	gth of scree	n	Developed capacity 30000014  Static level—depth to water 41 ft.
WELL LO	G	The state of the s	SKETCH SHOWING LOCATION
Formations Sandstone, shale, limestone, gravel and clay  A  A	From  0 Feet  4-0  5-0  5-4  5-6	To  #D Ft.  5-0  5-4  5-6  5-8	Locate in reference to numbered State Highways, St. Intersections, County roads, etc.  N.  W.  E.
Drilling Firm HAROLD WELL DRI Address RT. 2-JEFFERS	LLING		S.  See reverse side for instructions  Date

PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK.

# State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water 1562 W. First Avenue Columbus 12, Ohio

Nº 309878

Owner Grongle	<b></b>		Address J.c.	FECTSON RD, Bo	<b>x</b> 1
Location of property S.O.U	<u> </u>	F A.s-h	tabula	on Jefferson v	D. Lan
CONSTRUCTION	DETAILS		BAI	LING OR PUMPING TEST	
Casing diameter Len Type of screen Len Type of pump Capacity of pump Depth of pump setting	gth of scree	n	Drawdown	ft. Date of te	(, , 1¶, c) ft.
Date of completion				Label to the state of the state	NATT
WELL LC	•G		SKE	rch showing Locatio	N
Formations Sandstone, shale, limestone, gravel and clay	From	То	Loc State Highway	ate in reference to numbered ys, St. Intersections, County	roads, etc.
	0 Feet	Ft.		N.	
clay	21	35		JEFFCR'S O	
water 35 FT.			w.	J. CONRD.	E.
			See	S. reverse side for instructions	

PLEASE USE PENCIL OR TYPEWRITER

#### State of Ohio DEPARTMENT OF NATURAL RESOURCES

Nº 309856

Division of Water DO NOT USE INK. 1562 W. First Avenue .

County ASH+ MBING	As44 Township	Columbu	s 12, Ohio	f Township	
Owner Junes P	abe	-	Address /	low-Rd	
Owner June P.  Location of property	utes	46	male on	thewat	the 57 Sade
CONSTRUCTION	DETAILS	S	BAILI	ING OR PUMPING TES	T
Casing diameter Ler	igth of casi	ng 16 "	Pumping Rate	G.P.M. Duration of te	esthrs.
Type of screenLer				ft. Date	
Type of pump				to water	ft.
Capacity of pump				oudy, taste, odor)	
Depth of pump setting		*************			
Date of completion			1	7	
WELL LO	)G		SKETC	H SHOWING LOCATIO	N
Formations Sandstone, shale, limestone, gravel and clay	From	То	Locate State Highways,	in reference to numbered St. Intersections, County	roads, etc.
	0 Feet			N.	
Clarg	7	30		*Qser	
water at 30 ft			W	S.	E.
				erse side for instructions	
Drilling Firm Paul 11/2 Address R. D. # 2	ule		Date als -	2.1964	
Address R. D # 2	alt	ful.	Signed Page	O E no suite	

PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK.

## State of Ohio DEPARTMENT OF NATURAL RESOURCES

Division of Water 1562 W. First Avenue

Columbus 12, Ohio

Nº 284649

County ish tabula	Township	EDge	Section of Township	
Owner HomerDi	epp.		Address North Ridge E	0.5
			N-2	
CONSTRUCTION	DETAILS		BAILING OR PUMPING T	EST
Casing diameter	gth of scre	en	Static level-depth to water	ft.
Depth of pump setting  Date of completion				
Formations Sandstone, shale, limestone, gravel and clay	From	То	Locate in reference to number State Highways, St. Intersections, Coun	red
vater az	0 Feet	3 9 50	N. North Eider East	E.
Drilling Firm MR. PAL		2:11	S. See reverse side for instruction  Date 1963	ns
Address CarrisonR	oa JR	FD2	Signed MR, Pa 1/1/2	

State of Ohio

695236

TYPE OR USE PEN SELF-TRANSCRIBING PRESS HARD! DEPARTMENT OF NATURAL RESOURCES
Division of Water
1939 Fountain Square Drive
Columbus, Ohio 43224
(614) 265-6739

Permit Number 84-9/

COUNTY AShTABULA TOWNSHIP AShTABULA OWNER BUILDER JOIL RENAUD PROPERTY ADDRESS 932 Zoma Drive, Ashtabila MADDRESS OF WELL LOCATION A) LOCATION OF PROPERTY West side - 1/8 mile w. of Cystal springs **CONSTRUCTION DETAILS** CASING GROUT Diameter 8 % in. Length 27 \_ft\_\_Wall Thickness 2/9\_in\_\_Material \_\_\_ \_\_\_\_\_ Volume used \_\_\_ Method of installation Joints: 

| Threaded XWelded | Solvent | Other | Depth: placed from | **SCREEN GRAVEL PACK** Type (wire wrapped, louvered, etc.) \_\_\_\_\_\_ Material \_\_\_\_\_ Material \_\_\_\_\_ ft. Diameter \_\_\_\_\_\_in. Method of installation \_\_\_\_\_ □ Rotary Cable □ Augered □ Driven □ Dug □ Other \_\_\_\_\_ Pitless Device Adapter □ Preassembled unit Date of completion July 9 1991 Use of Well Home PUMP **WELL TEST** Type of pump \_\_\_ \_\_\_\_ Capacity \_\_\_ Bailing 💢 Pump set at . Test rate \_ \_\_gpm Duration of test \_\_\_ Pump installed by \_\_\_\_ Measured from:  $\nearrow$  top of casing  $\square$  ground fevel  $\square$  Other  $\square$  Static Level (depth to water)  $\square$   $\square$  ft. Date:  $\square$   $\square$  Date:  $\square$   $\square$   $\square$   $\square$  ft. **WELL LOG\*** ATE DEPTH(S) AT WHICH WATER IS ENCOUNTERED. color, texture, hardness, and formation: (Attach a copy of the pumping test record, per 1521.05, ORC) From То sandstone, shale, limestone, gravel, clay, sand, etc. Off SKETCH SHOWING LOCATION 1 B tt Show distances well lies from numbered 20 state highways, street intersections, county roads, etc. マス VIFTER AT 22 How ard Rd itional space is needed to complete well log, use next consecutively numbered form **DNR 780**: Dhilling FIRM LL HAll well Oxilling SIGNED ADDRESS RD #/ CITY, STATE, ZIP SACGETTOWN, PA 16,433 \_\_\_\_ODH REGISTRATION NUMBER \_\_

ORIGINAL

NO CARBON PAPER NECESSARY-'ELF-TRANSCRIBING

State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water Fountain Square Columbus, Ohio 43224

574942

CONSTRUCTION	DETAILS		BAILING OR PUMPING TEST (specify one by circling)
ype of screen Ler ype of pump Capacity of pump Depth of pump setting sate of completion			Test rate 3 gpm Duration of test hrs  Drawdown Itala ft Date Gume 4,1981  Static level (depth to water) ft  Quality (clear, cloudy, taste, odor) Clear, mo  taste ov odor  Pump installed by SKETCH SHOWING LOCATION
Formations: sandstone, shale,	From	То	Locate in reference to numbered state highways, street intersections, county roads, etc.
Timestone, gravel, clay  The Sandy Landy Clay  Blue Clay & Blue She  Blue & Blue & Blue & Shee	0 ft  1	/ ft  \$ 21 31 58	N Rt. 20 W

NO CARBON PAPER NECESSARY --SELF-TRANSCRIBING State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

624665

TOWNSHIP	ASSTABU	iasection of township	
		ADDRESS SOY Sill Rd.	
y sills	7d:		
DETAILS		BAILING OR PUMPING TEST (specify one by circling)	
gth of screen		Test rate gpm Duration of test Y	ft
•		SKETCH SHOWING LOCATION	
From	То	Locate in reference to numbered state highways, street intersections, county roads, etc.	
0 ft  3 '  6 '  9 '	りft 3 ら ら 17・	Rail Rd. 1. 1 11 11 Sill Ro  Rail Rd. 1. 1 11 11 11 11 11 11 11 11 11 11 11	E
	From  Oft  3  6	From To  Oft 1 ft  3 5 6 6 9	BAILING OR PUMPING TEST (specify one by circling)  gth of casing ///  gth of screen

ADDRESS 2638 Townline Rd Madisan SIGNED FO

DRILLING FIRM FRED'S WATER SERVICE DATE 2 SEPT

State of Ohio

NO CARBON PAPER

NECESSARY-

ELF-TRANSCRIBING

DEPARTMENT OF NATURAL RESOURCES Division of Water

Fountain Square Columbus, Ohio 43224 626858

OWNER			ADDRESS AND ADDRESS
LOCATION OF PROPERTY	<u> </u>		
CONSTRUCTION	DETAILS		BAILING OR PUMPING TEST (specify one by circling)
ssing diameterLer	ngth of casing_	*/:*	Test rate gpm Duration of test hr
pe of screenLe	ngth of screen.		Drawdown ft Date 750005 A
pe of pump			Static level (depth to water)
pacity of pump			Quality (clear, cloudy, taste, odor)
pth of pump setting			
te of completion			Pump installed by
WELL LOG	*		SKETCH SHOWING LOCATION
Formations: sandstone, shale, limestone, gravel, clay	From	То	Locate in reference to numbered state highways, street intersections, county roads, etc.
	0 ft	ft	N
	1 100	1.1	1
· · · · · ·		59	
		22	
			5 th 1 )
M			<b>W</b> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
			( ) P
			$(\neg)$
•			_
			<b>S</b>
			5/23/20
DRILLING FIRM			DATE

ODICINAL CODY CODED DIVIDION OF WATER FORWARDS OF

668198

NO CARBON PAPER NECESSARY-SELF-TRANSCRIBING

# State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water Fountain Square Columbus, Ohio 43224

COUNTY 1	_ TOWNSHIP	<u> </u>	SECTION OF TOWNSHIP
OWNER			ADDRESS
LOCATION OF PROPERTY			
CONSTRUCTION	DETAILS		BAILING OR PUMPING TEST (specify one by circling)
Casing diameter Le	ength of casing		Test rategpm Duration of testhrd
Type of screenL			Drawdown 15 ft Date
Type of pump			Static level (depth to water) 16
Capacity of pump			Quality (clear, cloudy, taste, odor)
Depth of pump setting		/	
Date of completion Rotary 🗆 or Cable	nc/5/	188	Pump installed by
MELL TO	G+	····	SKETCH SHOWING LOCATION
Formations: sandstone, shale, limestone, gravel, clay	From	То	Locate in reference to numbered state highways, street intersections, county roads, etc.
May	0 ft	22ft	N
	22 2200	0.5	W State E
ADDRESS	L TOTT LTVRE	ecutively numbere	UMBER DATE 91/8'8
			hin 30 days after completion.

€000) 2 km

State of Ohio

NO CARBON PAPER
NECESSARY -ELF-TRANSCRIBING

DEPARTMENT OF NATURAL RESOURCES

Division of Water

Fountain Square

Columbus, Ohio 43224

635080

COUNTY Ashtabala T	OWNSHIP Ashte	abula section of township
OWNER DNA HILL	121 Av 1/2	ADDRESS Rt. PCI HELLER
LOCATION OF PROPERTY	<u>K+, 791 /ki,</u>	nile Factoritil
CONSTRUCTION DI	ETAILS	BAILING OR PUMPING TEST (specify one by circling)
Lengt  ype of screen Lengt  ype of pump  apacity of pump  epth of pump setting  ate of completion   Control   Control	h of screen	Test rate gpm Duration of test hrs  Drawdown ft Date t 2 1/987  Static level (depth to water) ft  Quality (clear, cloudy, taste, odor) ft
WELL LOG*		SKETCH SHOWING LOCATION
Formations: sandstone, shale, limestone, gravel, clay	From To	Locate in reference to numbered state highways, street intersections, county roads, etc.
Clay want barawel shale	0ft 38 38 H) 4/1 60	W RHII DAPIVE E  STATE DAPIVE  S
DRILLING FIRM 911 5. R.	WELL DRILLING	DATE NOV. 1, 1987
ADDRESS Jefferson, O	hio 44047	SIGNED Harold Grant Consecutive numbered form.

**ODICINAL CODY - ODNO DIVICION OF WATER FOUNTAIN CO** 

ORIGINAL

NO CARBON PAPER NECESSARY-SELF-TRANSCRIBING State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Fountain Square
Columbus, Ohio 43224

547006

astalala SECTION OF TOWNSHIP. ADDRESS\_ LOCATION OF PROPERTY LING OR PUMPING TEST CONSTRUCTION DETAILS (specify one by circling) \_\_\_\_Length of casing\_ Casing diameter \_\_\_ Test rate\_ Duration of test\_\_\_ \_\_\_\_Length of screen \_\_\_ Type of screen \_\_\_ Drawdown \_ Type of pump. Static level (depth to water)\_\_\_ Capacity of pump \_\_\_\_ Quality (clear, cloudy, taste, odor)\_\_\_\_ Depth of pump setting \_\_\_ Date of completion... Pump installed by \_\_\_\_ SKETCH SHOWING LOCATION WELL LOG\* Locate in reference to numbered Formations: sandstone, shale, From Τo limestone, gravel, clay state highways, street intersections, county roads, etc. 0 ft N 40 Pundy Road. W

<sup>\*</sup>If additional space is needed to complete well log, use next consecutive numbered form.

NO CARBON PAPER NECESSARY—

SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES

Division of Water

65 S. Front St., Rm. 815 Phone ( Columbus. Ohio 43215

Phone (614) 469-2646

465638

County ashtabola	Township	Ashta	Section of Township
Owner Wellen 7 en			
Location of property 1	. 1		. 46 in ashtapula
CONSTRUCTION	DETAILS		BAILING OR PUMPING TEST (Specify one by circling)
Casing diameter Length of casing  Type of screen Length of screen  Type of pump  Capacity of pump  Depth of pump setting			Test Rate
Date of completion.	****	***************************************	Pump installed by
WELL LO	G*		SKETCH SHOWING LOCATION
Formations Sandstone, shale, limestone, gravel and clay	From	То	Locate in reference to numbered State Highways, St. Intersections, County roads, etc.
0-55 clay -12 gruich Sand -12 gruich Sand	0 Feet 555	55 Ft.	W. E.
Address Marsh Hay	n C sa	Ze Rd.	Date State = 74 Signed Faul & me Still ell log, use next consecutive numbered form.

NO CARBON PAPER NECESSARY-SELF-TRANSCRIBING

State of Ohio DEPARTMENT OF NATURAL RESOURCES Division of Water

65 S. Front St., Rm. 815 Phone (614) 469-2646

Columbus, Ohio 43215

No. 389982

Owner andy Car	ho			
Location of property.			BAILING OR PUMPING TEST	
CONSTRUCTION DETAILS			(Specify one by circling)	
asing diameter 8 Len	gth of casi	ng <b>54</b>	Test Rate 3.0 J. G.P.M. Duration of test hr	
ype of screenLen	gth of scre	en	Drawdown ft. Date Supr 13 6 2	
ype of pump			Static level-depth to water 10	
apacity of pump			Quality (clear, cloudy, taste, odor)	
epth of pump setting		~~~****		
ate of completion	-69,	***	Pump installed by	
WELL LO	G*		SKETCH SHOWING LOCATION	
Formations Sandstone, shale, limestone, gravel and clay	From	То	Locate in reference to numbered State Highways, St. Intersections, County roads, etc.	
	0 Feet	52 Ft.	N <sub>1</sub> 1	
<i>A A</i>		700		
Shale Rock	28	80	W. E.	
Water at				
€0 ft				
			S.	
rilling Firm Paul &	me	400	Deta 8,07/3 69	
rilling Firm Paul C ddress Cast Ya	Jenel	leRd	Date Sept 13-69 Signed Paul Eme Hill	